

WHAT IS CLAIMED IS:

1. A method for at least one of operating and observing a device for monitoring at least one control device that is coupled with a plant, comprising:
 - utilizing at least one connected remote operator unit that communicates with the monitoring device; and
 - providing a function block which intervenes as an interface module in communications between the monitoring device on the one hand and the connected operator unit on the other hand, which evaluates information addressed to the connected operator unit, and which processes the information such that the connected operator unit directly displays the information as a terminal.
2. Method as claimed in Claim 1, wherein the function block is provided in the monitoring device.
3. Method as claimed in Claim 1, wherein the function block is provided in a device external to but connected to the monitoring device.
4. Method as claimed in Claim 1, wherein the function block comprises a software program.
5. Method as claimed in Claim 1, wherein the function block intervenes between a monitoring function block of the monitoring device and the connected operator unit.
6. Method as claimed in Claim 1, wherein the interfacing function block performs, at least partially, operator unit functions.

7. Method as claimed in Claim 6, wherein the operator unit functions comprise operator unit program steps.

8. Method as claimed in Claim 2, wherein, for execution, the interfacing function block comprises an additional program part loaded at least partially into a working memory of the monitoring device.

9. Method as claimed in Claim 3, wherein, for execution, the interfacing function block comprises an additional program part loaded at least partially into a working memory of the interface device connected to the monitoring device.

10. Method as claimed in Claim 1, wherein the interfacing function block is configured to be multiply addressed by at least the connected operator unit, to execute individual computations associated with the addressing operator unit, and to store the computation results in a uniquely assigned manner in the addressing operator unit.

11. Method as claimed in Claim 4, wherein the interfacing software program is configured to be multiply addressed by at least the connected operator unit, to execute individual computations associated with the addressing operator unit, and to store the computation results in a uniquely assigned manner in the addressing operator unit.

12. Method as claimed in Claim 1, wherein the interfacing function block, is configured to be multiply addressed by plural, differing operator units, to execute individual computations associated respectively with the plural operator units, and to store the computation results in a uniquely assigned manner in the respective operator units.

13. Method as claimed in Claim 1, wherein the interfacing function block individually addresses a plurality of connected remote operator units.

14. Method as claimed in Claim 13, wherein the interface function block is configured to be addressed with differing parameters of the monitoring device , in order to access the plurality of operator units individually.

15. Method as claimed in Claim 14, wherein the interface function block is addressed by at least one of monitoring logic and a monitoring program of the monitoring device.

16. Method as claimed in Claim 14, wherein the differing parameters comprise device addresses.

17. Method as claimed in Claim 5, wherein communication between the interfacing function block and the monitoring function block of the monitoring device is combined in one channel.

18. Method as claimed in Claim 17, wherein the interfacing function block comprises a plurality of channels for communicating with a plurality of monitoring function blocks.

19. Method as claimed in Claim 1, wherein the interfacing function block comprises a plurality of channels for communicating with a plurality of monitoring devices.

20. Method as claimed in Claim 13, wherein the interfacing function block, in downlink-side communication from the monitoring device to the operator units, operates as a distributor.

21. Method as claimed in Claim 20 wherein the interfacing function block, in the downlink-side communication from the monitoring device to the operator units, operates as a demultiplexer.

22. Method as claimed in Claim 13, wherein the interfacing function block, in uplink-side communication from the operator units to the monitoring device, operates as a signal combining module.

23. Method as claimed in Claim 22, wherein the interfacing function block, in the uplink-side communication from the operator units to the monitoring device, operates as a multiplexer.

24. Method as claimed in Claim 22, wherein the uplink-side communication is priority-controlled.

25. Method as claimed in Claim 24, wherein, when a priority is assigned to one of the operator units, incoming information from another of the operator units is suppressed or is redirected into a buffer associated with the other operating unit.

26. Method as claimed in Claim 13, wherein the interfacing function block manages all the connected operator units.

27. Method as claimed in Claim 26, wherein the interface function block additionally manages memory areas associated with the operator units, particularly for buffering incoming information.

28. Method as claimed in Claim 27, wherein the interface function block manages the memory areas associated with the operator units for buffering incoming information.

29. Method as claimed in Claim 26, wherein, the interfacing function block comprises a software program and a new operator unit is initially logged on by the function block by calling a respective starting address for the new operator unit.

30. Method as claimed in Claim 29, wherein, when an assigned starting address is called, the software program of the interfacing function block first checks whether an operator unit has already logged on and, if not, first executes an initialization phase.

31. Method as claimed in Claim 30, wherein the initialization phase comprises communicating with a monitoring block of the monitoring device.

32. Method as claimed in Claim 29, wherein, when the starting address for the new operator unit assigned to the software program is called, an additional management data record is created and a memory area assigned for the new operator unit.

33. Method as claimed in Claim 32, wherein, when the new operator unit is logged on, information on the hardware structure of the new operator unit is queried and stored in the management data record assigned for the new operator unit.

34. Method as claimed in Claim 26, wherein the interfacing function block comprises a management part and an execution part that is called up by the management part, that is supplied with information associated with a given one of the operator units, that subsequently executes program steps that are associated with the given operator unit, and that outputs result information.

35. Method as claimed in Claim 34, wherein the result information comprises a bitmap configured to be loaded into a screen memory of the given operator unit.

36. Method as claimed in Claim 34, wherein the information comprises information on hardware characteristics of the given operator unit stored in a respective management data record, and wherein the information is used by the execution part to generate the result information in a suitable format.

37. Method as claimed in Claim 36, wherein the information comprises information defining screen memory size for the given operator unit.

38. Method as claimed in Claim 34, wherein the result information of the execution part is converted into a predefined transmission data format by the management part and is transmitted to the given operator unit.

39. Method as claimed in Claim 38, wherein the result information is transmitted to the given operator unit together with an instruction to load the transmitted result information as a bitmap into a screen memory of the given operator unit.

40. Method as claimed in Claim 13, wherein a transmission data format used in communicating between the operator units and the interfacing function block utilizes a standard data protocol.

41. Method as claimed in Claim 13, wherein the operator units are provided with, in addition to an operating system, a program for at least one of displaying and analyzing data received from the interfacing function block.

42. An assembly, comprising:

at least one controller coupled into an industrial plant;
a monitoring device and operator units remote from and communicating with
the monitoring device, configured to monitor the at least one controller; and
an interface function block coupled as an interface module into
communication between the monitoring device and the operator units, and configured
to analyze information addressed respectively to the operator units and to process the
information such that the respective operator units display the processed information
as a terminal.

43. Assembly as claimed in Claim 42, wherein the interface function block
is incorporated into the monitoring device.

44. Assembly as claimed in Claim 42, wherein the interface function block
is external to the monitoring device.

45. Assembly as claimed in Claim 42, wherein the monitoring block
comprises a monitoring function block.

46. Assembly as claimed in Claim 42, wherein the interface function block
comprises:

a management part configured to manage the operator units and
an execution part, which is configured to be called by the management part, to
be supplied with information associated with the operator units, to execute program
steps respectively associated with the operator units, and to output data resulting from
the execution as result information, respectively, to the operator units.

47. Assembly as claimed in Claim 46, wherein the result information
comprises bitmaps to be loaded into screen memories of the respective operator units.

48. Assembly as claimed in Claim 42, further comprising additional monitoring devices, wherein the interface function block comprises a plurality of channels for communicating respectively with the plurality of monitoring devices.

49. Assembly as claimed in Claim 42, further comprising a plurality of monitoring function blocks, wherein the interface function block comprises a plurality of channels for communicating respectively with the plurality of monitoring function blocks.